

**RETURN OF THE *COMMA POLYGONIA C-ALBUM* L.
(LEP.: NYMPHALIDAE) TO NORTHUMBERLAND:
HISTORICAL REVIEW AND CURRENT STATUS**

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Introduction

THE HISTORY of the fluctuations in the range of the Comma *Polygonia c-album* within the British Isles has been admirably reviewed by Pratt (1986-87). The generally held view that *P. c-album* no longer occurs in north-east England (Dunn & Parrack, 1986; Thomas, 1986; Emmet & Heath, 1989; Thomas & Lewington, 1991), was correct at the times of publication of these standard texts, but during the 1990s there has been an expansion of the range of *P. c-album*, initially in County Durham and subsequently further north in Northumberland.

The purpose of this paper is to draw wider attention to this remarkable expansion of the range of *P. c-album* into Northumberland (Watsonian Vice-Counties 67 & 68), by reviewing the historical aspects of its former distribution, and by reference to more recent records and to personal observations made in Northumberland during the period 1995 to 1998.

Early history in Northumberland (18th & 19th centuries)

The earliest known record is that of the Rev. John Wallis (1769) who was curate at Simonburn in Northumberland. At the time scientific names were not well-established and each of the nine species of butterfly listed by Wallis is given a short descriptive title in English. The Comma is readily recognisable as "The tortoise-flhell Butterfly with lacinated wings" and Wallis states that it "is not unfrequent in vale meadows, and gardens in Auguft". Although Selby (1839) does not mention the Comma in his list for Twizell and the surrounding countryside near Belford Northumberland, it was subsequently revealed by Robson (1899) that there was a specimen in the Twizell collection when he had it examined. Wailes (1857) considered that the Comma (*Grapta c-album*) was probably more widespread in Northumberland than was generally appreciated. At the end of the 19th century, Robson (1899), stated that the Comma (*Vanessa c-album*) was not so abundant as it had been thirty years earlier in north-east England and mentions only one record for Northumberland.

It is difficult to ascertain the true state of affairs at the end of the 19th century. Pratt (1986) concluded that the species became extinct in Northumberland after 1868 and Newman (1871) states he saw a specimen in 1868 from Northumberland taken near Newcastle by a Mr W. Maling.

20th century records in Northumberland

A casual capture was made at Rothbury at the beginning of the century, in 1904, but nothing further was reported until a single individual was observed nectaring on devil's bit scabious at Cockle Park in late September 1942 (Dunn & Rogerson,

1942). Further solitary individuals were seen by B.N. Rossiter at Hackwood near Hexham in July 1985 (Dunn & Parrack, 1986) and by Bell (1993) at Bamburgh on the Northumberland coast in early October 1992. During 1995 there were sightings in July and August of individual butterflies on an allotment at Wylam (Swinburn, 1996) and on *Buddleja* at Ordley near the Devil's Water (Rossiter, 1996). In September 1996, Banks (1998) sighted a Comma at Arcot Pond north of Morpeth and a single specimen was seen in August 1997 in the southernmost part of the county near High Acton Mill (Eales, 1998). There are additional records for Newcastle and Slaley Forest during 1996 and Bamburgh in 1997 (Parrack, 1998).

Personal records 1995 to 1998

During this four year period I have observed *P. c-album* at eleven different locations within nine different tetrads (2Km X 2Km squares) in Northumberland.

I first saw a Comma in Northumberland nectaring on *Buddleja* in my small garden at Tynemouth (NZ 358701) on 10 August 1995 (Ellis, 1996a). The following spring, on 13 May 1996, I watched a single individual nectaring on dandelion flowers in the valley of the River Wansbeck west of Bothal weir (NZ 229862). This is a woodland path alongside the river and the butterfly may have hibernated in the wood over the 1995-96 winter (Ellis, 1997a). Later in the year I saw a further individual on 10 September 1996 several kilometres downstream in the Riverside Country Park near Ashington (NZ 262864) (Ellis, 1997b).

In the spring of 1997 I recorded four different individuals (Ellis, 1998a). Three were again in the valley of the River Wansbeck between Morpeth and Bothal; one near the viaduct (NZ 215865) and another near the Jubilee Well (NZ 221860), both on 29 March 1997. The third, on 23 April 1997, was close to the previous year's sighting near Bothal weir. The fourth spring sighting that year was at a new location in the valley of the River Blyth near Humford weir, Bedlington (NZ 261797) on 28 May 1997. The butterfly was perched on a riverside elm tree.

During the summer of 1997 (Ellis, 1998b) I encountered two further Comma butterflies near Humford; one on 31 July was on the riverside woodland path (NZ 266803) and the other, on 29 August and 5 September, was feeding avidly on ripe blackberries in a hedgerow at the edge of a nearby plantation (NZ 264806). In the autumn of 1997, Comma butterflies visited my garden in Tynemouth to nectar on various flowers on 5, 18 and 20 October. Only one was seen at any one time, but comparison of the wing markings in photographs subsequently confirmed that there were at least two individuals (Ellis, 1998b).

1998 proved to be the most rewarding season to date when I saw five different individuals at five different locations in the springtime. In the summer, in addition to adults, I discovered pupae for the first time in Northumberland. The 1998 observations are summarised here in chronological order:

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| 15 March | Valley of River Wansbeck, near the Community Tip east of Morpeth (NZ 212868). One adult nectaring on "pussy-willow" (sallow) flowers. |
| 28 March | Tynemouth, garden (NZ 358701). One adult basking and nectaring on blue Hyacinth. |

30 March	Holywell Dene, Seaton Sluice (NZ 336761). One adult nectaring on lesser celandine.
25 April	Valley of River Wansbeck, west of Bothal weir (NZ 232863). One adult basking.
7 May	Valley River Blyth, Humford Bedlington (NZ 266804). One adult.
31 July	Tynemouth, near The Haven (NZ 371691). One adult.
13 August	Valley River Blyth, Humford Bedlington (NZ 266804). One adult and two pupae on elm by riverside path. One pupa emerged.
21 August	Same locality, one adult (NZ 264808) and two additional pupae (NZ 266804).
25 August	Same locality, four adults (NZ 266804). Three pupae emerged.
14 September	Gosforth Park Reserve, Newcastle-upon-Tyne (NZ 260699). One adult nectaring on flowers in Lodge garden.
7 October	Fourth pupa at Humford had emerged; empty pupal case suspended from elm leaf.

Discussion

The early records indicate that the Comma occurred in Northumberland during the 18th century, but subsequently became less frequent and disappeared sometime in the last third of the 19th century. The situation was similar further south in County Durham (Wailles, 1857; Robson, 1899), to the north in Berwickshire (Long, 1959) and in Scotland (Thomson, 1980).

Although the Comma is known to have spread northwards in Britain as far as Yorkshire during the 1980s (Sutton & Beaumont, 1989), and the very occasional individual stray appeared in Northumberland during the first half of the 20th century (Dunn & Rogerson, 1942), there was no indication of the remarkable events to come until the 1990s. Initially, from 1992, there were increasing numbers of sightings in County Durham (Jones, 1993; Greenshields, 1995; Waller, 1996, 1997; Coult, 1996, 1997; Bowey & Westerberg, 1997; McCutcheon, 1997; Donnison, 1997; Wynn, 1997) and in the last few years the species, although still uncommon, has become more widespread in the county (Ellis, 1997) and is known to be breeding in several localities, including Castle Eden Dene (Eales, 1997; Parrack, 1998). Currently there are just over eighty tetrads recorded in County Durham (VC66) which account for about three-quarters of the tetrads in which the Comma has been recorded in North-east England (VCs 66, 67, 68).

From 1995 onwards, the increasing number of sightings in Northumberland gave rise to the hope that the Comma had returned to that county too as a breeding species. There are progressively fewer records northwards in the region. Thus, of the 31 tetrads in the whole of Northumberland, 26 are in South Northumberland (VC67) and only five in North Northumberland (VC68). It has to be admitted that in Northumberland the majority of the records have been solitary individuals, which could be dismissed as strays. However, my own observations in south-east Northumberland suggest otherwise.

Although I have been observing and recording butterflies in Northumberland for thirty-five years since 1964, it was not until the summer of 1995 that I saw my first Comma in the county – in my garden at Tynemouth. Since then, I have seen at least 23 different individuals, with increasing numbers each year to a maximum of 12 in 1998. The few early personal records in 1995 and 1996 were consistent with casual strays reaching Northumberland from further south, but the later records suggest that colonisation might be occurring. This view receives support from the observation that some 43.4% of my records were of individuals sighted in springtime, consistent with them having overwintered in local woods. My finding of individuals at one locality in the valley of the River Blyth, Humford, near Bedlington, in successive springs and summers (1997-98) is particularly interesting and suggestive of local colonisation. Further support comes from the findings of pupae at this location.

This is the first time I have found the pupae of *P. c-album* in the wild in Northumberland. Each pupa was suspended from the underside of an elm leaf mid-rib or stalk. One, high up at about four metres above the ground, had already emerged when first found. At this distance it closely resembled a curled brown leaf. Another three pupae were initially intact and were located up to two metres above the ground. In each instance the leaves distal to the pupa showed evidence of having been eaten by a caterpillar.

Most of my sightings of adults have been on or near elm trees, especially those with regenerating stumps after felling. The caterpillars may utilise a wide variety of foodplants including hop, stinging nettle, elm, currants, thistle and mallow (Pratt, 1987). Further south in Britain, stinging nettle seems to be mostly used (Thomas & Lewington, 1991), but it seems that the primary foodplant varies from one part of the country to another, depending upon what is available. My, admittedly limited, experience in Northumberland suggests that elm is a significant local foodplant and it is interesting to note that caterpillars have also been found feeding on elm leaves in County Durham (Waller, 1997).

When the caterpillars feed on lowly plants, such as nettles, it is said that they pupate low down amongst the vegetation and are very difficult to find (Thomas, 1986; Emmet & Heath, 1989). In the case of elm at least some of the pupae are to be found in an exposed position suspended well up in the trees from the underside of the leaf mid-rib, where they are not too difficult to find.

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